

REMARKS

Claims 1-12 are pending and under consideration. In the non-final Office Action dated August 22, 2007, the Examiner made the following disposition:

- A.) Commented on priority claim.
- B.) Commented on claims 1 and 7.
- C.) Rejected claims 1-12 under 35 U.S.C. §§102(b)/103(a) in view of *Kawakami, et al.* (U.S. 6,432,585) (“*Kawakami*”).
- D.) Rejected claims 1, 3-7, and 9-12 under 35 U.S.C. §§102(b)/103(a) in view of *Suzuki, et al.* (U.S. 6,413,672) (“*Suzuki 672*”).
- E.) Rejected claims 1, 4, 5, 7, 10, and 11 under 35 U.S.C. §§102(b)/103(a) in view of *Suzuki, et al.* (U.S. 6,171,725) (“*Suzuki 725*”).
- F.) Rejected claims 1-12 under 35 U.S.C. §§102(e)/103(a) in view of *Inoue, et al.* (U.S. 6,506,520) (“*Inoue*”).

Applicant respectfully traverses the rejections and addresses the Examiner’s disposition below.

A.) Comment on priority claim:

Applicant notes the discrepancy in the Declaration. Applicant will submit a new Declaration separately herefrom.

B.) Comment on claims 1 and 7:

Applicant respectfully submits that claims 1 and 7 do not include product-by-process limitations. However, in the event the relevant claim language is construed to include product-by-process limitations, Applicants note that:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially . . . where the manufacturing steps would be expected to impart distinctive structural characteristics to the final product.

MPEP 2113; *In re Garnero*, 412 F.2d 276, 279 (CCPA 1979).

As described in Applicant’s specification, Applicant’s claimed composite material has distinctive structural characteristics imparted by the application of a compressive force and a shearing force at the time the composite material is formed. Applicant’s claimed composite material exhibits improved cycle characteristics due to the application of a compressive force

and a shearing force at the time the composite material is formed. Conventional composite materials do not exhibit this improved cycle characteristic, because conventional composite material components are not bonded together by the application of a compressive force and a shearing force at the time the conventional composite material is formed. *Specification*, page 6.

C-F.) Rejections of the claims under 35 U.S.C. §§102 and 103 based on various references:

Applicant respectfully disagrees with the rejections.

Applicant's independent claims 1 and 7, each as amended, each claim subject matter relating to a composite material including a base material physically bonded by van der Waals forces to a carbonaceous material, the base material including at least one element selected from the Group 14 elements, except for carbon (C). The physical bonding of the base material to the carbonaceous material is effected by applying a compressive force and a shearing force to at least a part of a surface of a base material when the composite material is formed.

Applicant respectfully submits that claims 1 and 7 do not include product-by-process limitations. However, in the event the relevant claim language is construed to include product-by-process limitations, Applicants note that:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially . . . where the manufacturing steps would be expected to impart distinctive structural characteristics to the final product.

MPEP 2113; *In re Garnero*, 412 F.2d 276, 279 (CCPA 1979).

As described in Applicant's specification, Applicant's claimed composite material has distinctive structural characteristics imparted by the application of a compressive force and a shearing force at the time the composite material is formed. Applicant's claimed composite material exhibits improved cycle characteristics due to the application of a compressive force and a shearing force at the time the composite material is formed. Conventional composite materials do not exhibit this improved cycle characteristic, because conventional composite material components are not bonded together by the application of a compressive force and a shearing force at the time the conventional composite material is formed. *Specification*, page 6.

The cited references, taken singly or in combination, fail to disclose or suggest a composite material that exhibits improved cycle characteristics due to the application of a compressive force and a shearing force to a base material and a carbonaceous material at the time

the composite material is formed. Nowhere do the cited references suggest application of a compressive force and a shearing force at the time a composite material is formed. Thus, the composite material of the cited references could not have distinctive structural characteristics imparted by the application of a compressive force and a shearing force at the time the composite material is formed. The cited references at best disclose milling and/or mixing of ingredient materials. None discloses or fairly suggest particles or a material resulting from the application of a compressive force and shearing action.

For at least these reasons, the cited references, taken singly or in combination, fail to disclose or suggest claims 1 and 7.

Claims 2-6 and 8-12 depend directly or indirectly from claims 1 or 7 and are therefore allowable for at least the same reasons that claims 1 and 7 are allowable.

Applicant respectfully submits the rejections have been overcome and requests that they be withdrawn.

Conclusion

Accordingly, it is submitted that claims 1-12 are patentable, and that the application is in condition for allowance. Notice to the effect is respectfully requested.

Respectfully submitted,

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